

erythropoietin, wherein one additional site is introduced at about position ~~52, 53, 55, 86~~ or 114 and an N-linked carbohydrate chain is attached at said one additional site.

46. (original) An analog of human erythropoietin comprising the amino acid sequence of human erythropoietin from residues 1-165 as shown in SEQ ID NO:1 except for one or more amino acid changes which provide for one or more additional glycosylation site(s) as compared to human erythropoietin, wherein one additional site is introduced at position 52, 53, 55, 86 or 114 and an N-linked carbohydrate chain is attached at said one additional site.

47. (original) The analog of Claim 46 comprising additional glycosylation sites at positions 30, 55, 88 and 114 and wherein an N-linked carbohydrate chain is attached at each of said additional sites.

48. (currently amended) The analog of Claim 46 further comprising an additional glycosylation site at position 125 and wherein an O-linked carbohydrate chain is attached at the additional site.

49. (currently amended) An analog of human erythropoietin comprising the amino acid sequence from residues 1-165 as shown in SEQ ID NO:1 except for Asn at position 30, Thr at position 32, Asn at position 55, Thr at position 57, Val at position 87, Asn at position 88, Thr at position 90, Asn at position 114, Thr at position 116, and any one or more of Pro at position 124, Thr at position 125 and/or Thr at position 126.

50. (original) An analog of human erythropoietin comprising the amino acid sequence from residues 1-165 as shown in SEQ ID NO:1 except for the amino acid changes selected from the group consisting of:

Asn<sup>52</sup> Thr<sup>54</sup> Epo;

Asn<sup>53</sup> Thr<sup>55</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Val<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Thr<sup>125</sup> Epo;  
 Asn<sup>114</sup> Thr<sup>116</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>53</sup> Thr<sup>55</sup> Val<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Epo;  
 Asn<sup>55</sup> Thr<sup>57</sup> Epo;  
 Asn<sup>86</sup> Val<sup>87</sup> Thr<sup>88</sup> Epo;  
 Ala<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Epo;  
 Val<sup>87</sup> Asn<sup>88</sup> Ser<sup>90</sup> Epo;  
 Val<sup>87</sup> Asn<sup>88</sup> Gly<sup>89</sup> Thr<sup>90</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>53</sup> Thr<sup>55</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>114</sup> Thr<sup>116</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>53</sup> Thr<sup>55</sup> Val<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Asn<sup>114</sup> Thr<sup>116</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>55</sup> Thr<sup>57</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>55</sup> Thr<sup>57</sup> Val<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>55</sup> Thr<sup>57</sup> Asn<sup>114</sup> Thr<sup>116</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Val<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Asn<sup>114</sup> Thr<sup>116</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>55</sup> Thr<sup>57</sup> Val<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Asn<sup>114</sup> Thr<sup>116</sup> Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>55</sup> Thr<sup>57</sup> Val<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Pro<sup>124</sup> Thr<sup>125</sup> Thr<sup>126</sup>  
 Epo;  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>55</sup> Thr<sup>57</sup> Asn<sup>114</sup> Thr<sup>116</sup> Pro<sup>124</sup> Thr<sup>125</sup> Thr<sup>126</sup> Epo;  
 and  
 Asn<sup>30</sup> Thr<sup>32</sup> Asn<sup>55</sup> Thr<sup>57</sup> Val<sup>87</sup> Asn<sup>88</sup> Thr<sup>90</sup> Asn<sup>114</sup> Thr<sup>116</sup> Pro<sup>124</sup>  
 Thr<sup>125</sup> Thr<sup>126</sup> Epo;

51. (original) The analog of Claims 45, 46, 47, 48, 49 or 50 which is the product of expression of an exogenous DNA sequence.

52. (original) A composition comprising a therapeutically effective amount of an analog of Claims 45, 46, 47, 48, 49, or 50 and a pharmaceutically acceptable diluent, carrier, solubilizer, emulsifier, preservative, anti-oxidant and/or adjuvant.

53. (original) The composition of Claim 52 wherein the diluent is Tris, citrate, acetate or phosphate buffer.

54. (original) The composition of Claim 52 wherein the carrier is human albumin or gelatin.

55. (original) The composition of Claim 52 wherein the solubilizer is tween or polysorbate.

56. (original) The composition of Claim 52 wherein the preservative is thimerosal, parabens, benzylalconium chloride or benzyl alcohol.

57. (original) The composition of Claim 52 wherein the antioxidant is ascorbic acid or sodium metabisulfite.

58. (original) The composition of Claim 52 further comprising an amino acid.

59. (original) The composition of Claim 58 wherein the amino acid is lysine or glycine.

60. (original) The composition of Claim 52 which is in liquid or lyophilized form.

61. (new) The analog of Claim 45 comprising two additional glycosylation sites.

62. (new) The analog of Claim 45 comprising three additional glycosylation sites.

63. (new) The analog of Claim 45 comprising four additional glycosylation sites.

64. (new) The analog of Claim 45 comprising more than four additional glycosylation sites.

65. (new) The analog of Claim 46 comprising two additional glycosylation sites.

66. (new) The analog of Claim 46 comprising three additional glycosylation sites.

67. (new) The analog of Claim 46 comprising four additional glycosylation sites.

68. (new) The analog of Claim 46 comprising more than four additional glycosylation sites.

69. (new) The analog of Claims 61, 62, 63, 64, 65, 66, 67 or 68 which is the product of expression of an exogenous DNA sequence.

70. (new) A composition comprising a therapeutically effective amount of an analog of Claim 61, 62, 63, 64, 65, 66, 67 or 68 and a pharmaceutically acceptable diluent, carrier, solubilizer, emulsifier, preservative, anti-oxidant and/or adjuvant.

71. (new) The composition of Claim 70 wherein the diluent is Tris, citrate, acetate or phosphate buffer.

72. (new) The composition of Claim 70 wherein the carrier is human albumin or gelatin.

73. (new) The composition of Claim 70 wherein the solubilizer is tween or polysorbate.

74. (new) The composition of Claim 70 wherein the preservative is thimerosal, parabens, benzylalconium chloride or benzyl alcohol.

75. (new) The composition of Claim 70 wherein the antioxidant is ascorbic acid or sodium metabisulfite.

76. (new) The composition of Claim 70 further comprising an amino acid.

77. (new) The composition of Claim 76 wherein the amino acid is lysine or glycine.

78. (new) The composition of Claim 70 which is in liquid or lyophilized form.